

FOUR ECTOPARASITES FROM SOUTH DAKOTA¹Nixon Wilson²

ABSTRACT: Data is given for *Orchopeas howardii* (Baker), *Oeciacus vicarius* Horvath, *Argas cooleyi* Kohls & Hoogstraal, and *Ornithodoros concanensis* Cooley & Kohls collected in South Dakota. Each species is discussed in relation to its distribution in the northern Great Plains.

DESCRIPTORS: Ectoparasites, Siphonaptera, Hemiptera, Acari, South Dakota.

Two collections of four species of ectoparasites were made recently when passing through South Dakota. Their host relationships were not unusual; however, the distribution of three species was extended in the northern Great Plains, into South Dakota. The fourth species may have been collected previously from the southwestern part of the state. All specimens are in my collection.

INSECTA

Siphonaptera: Ceratophyllidae

Orchopeas howardii (Baker).—Two female fleas were found on a road kill fox squirrel, *Sciurus niger* Linnaeus, picked up on Interstate 90, 6 km south and west of Salem, McCook County, on 2 June 1977.

This is a common flea of the fox squirrel and gray squirrel, *S. carolinensis* Gmelin, in eastern North America and would be expected wherever they occur. It is not unusual to find it on other mammals which share the aboreal habitat with these squirrels (i.e. *Didelphis*, *Tamiasciurus*, *Glaucomys*, *Procyon*). The ranges of both squirrels extend into the Great Plains and the above record is an extension northward in the region.

Hemiptera: Cimicidae

Oeciacus vicarius Horvath.—Four males, 13 females, and four nymphs were collected from two partially completed nests of cliff swallows, *Petrochelidon pyrrhonota* (Vieillot), in a cement culvert, 13 km east and 6 km north of Wanblee, Washabaugh Co. (Pine Ridge Indian Reservation), on 26 May 1977.

The swallow bug is primarily a parasite of cliff swallows with large numbers usually found around active nests. It also has been reported from the nests of barn swallows, *Hirundo rustica* Linnaeus, and a nest of the

¹ Accepted for publication: October 3, 1977

² Department of Biology, University of Northern Iowa, Cedar Falls, Iowa 50613.

white-throated swift, *Aeronautes saxatalis* (Woodhouse) (Usinger, 1966). Usinger (1966) indicates numerous collection localities in North America on a distribution map. One appears to be from southwestern South Dakota, and he mentions material from nearby Cedar Co., Nebraska taken from the bridge over the Missouri River at Yankton.

ACARI

Metastigmata: Argasidae

Argas cooleyi Kohls & Hoogstraal.—One male, three females, seven nymphs, two larvae, and one larval skin were collected from the same nests as the swallow bugs.

It is primarily a parasite of cliff swallows with single records from the barred owl, *Strix varia* Barton, and nest of the California condor, *Gymnogyps californianus* (Shaw) (Kohls & Hoogstraal, 1960). The distribution is extended some 430 km east northeast from Casper, Natrona Co., Wyoming. Other localities slightly more distant are Myers, Treasure Co., Montana and Fort Collins, Larimer Co., Colorado. This eastern extension in the northern Great Plains is equal to that of the two previous easternmost localities in Texas (see Howell and Chapman, 1976).

Ornithodoros concanensis Cooley & Kohls.—One nymph and one larva also were collected from the same nests as the swallow bugs.

It has been collected from bat infested caves and crevices, cliff swallow nests, and three species of falconiform birds (Kohls et al., 1965). Cook (1972) has shown that *O. concanensis* is capable of feeding on both cliff swallows and bats in its natural environment, the selection of hosts depending on seasonal availability. In the same situation *A. cooleyi* fed only on cliff swallows. Nearby localities in the northern Great Plains are Myers, Montana, Sheridan, Sheridan Co. and Chugwater, Platte Co., Wyoming, Hereford, Weld Co., Colorado, and Osborne, Osborne Co., Kansas. The closest of these is Chugwater, approximately 350 km to the southwest. Osborne and several localities in Texas extend slightly farther east.

LITERATURE CITED

- Cook, B. 1972. Hosts of *Argas cooleyi* and *Ornithodoros concanensis* (Acarina: Argasidae) in a cliff-face habitat. J. Med. Entomol. 9: 315-317.
- Howell, F.G. and B.R. Chapman. 1976. Acarines associated with cliff swallow communities in north west Texas. Southwest. Natur. 21: 275-280.
- Kohls, G.M. and H. Hoogstraal. 1960. Observations on the subgenus *Argas* (Ixodoidea, Argasidae, *Argas*) 2. *A. cooleyi*, new species, from western North American birds. Ann. Entomol. Soc. Amer. 53: 625-631.
- Kohls, G.M., D.E. Sonenshine, and C.M. Clifford. 1965. The systematics of the subfamily Ornithodorinae (Acarina: Argasidae). II. Identification of the larvae of the Western Hemisphere and descriptions of three new species. Ann. Entomol. Soc. Amer. 58: 331-364.
- Usinger, R.L. 1966. Monograph of Cimicidae. Thomas Say Foundation, vol. 7, 585 pp.